

COMMENTS ON THE DISTRIBUTION OF
SEDUM PULCHELLUM (CRASSULACEAE)
IN TEXAS

H.L. WHITE, J.R. BRANCH and W.C. HOLMES

Department of Biology
Baylor University
Waco, TX 76798-7388, U.S.A.

J.R. SINGHURST

Wildlife Division
Texas Parks and Wildlife Department
Austin, TX 78744, U.S.A.

Sedum pulchellum Michx. is usually a succulent annual, but may occasionally be a perennial due to the production of secondary roots (Clausen 1975). Leaves of rosettes, when present, are spirally arranged, spatulate-linear, obtuse and slightly papillose at the apex. Leaves of floriferous stems are linear and subterete. Among the North American species, *S. pulchellum* is unique in that the leaves of floriferous stems have basal sagittate spurs (Clausen 1975). Flowers are pale pink, purplish-white, or white, 4-merous, sessile or subsessile, and occur primarily in 3-branched cymes. Peak flowering takes place in May and June, but sometimes as early as March.

According to Clausen (1975), *Sedum pulchellum* occurs on flat rock formations (typically limestone, sandstone, or chert) from NC Kentucky south to NW Georgia, west through N Alabama to Arkansas, Texas, Oklahoma, SE Kansas, Missouri, and S Illinois. Northern Mississippi is not included in Clausen's distribution, but the species is known from Oktibbeha County [*Brent 181* (IBE!); *Stauffer s.n.* (MISSA!)]. Recent collections of the species in the central part of the state and the lack of satisfactory documentation of its occurrence have prompted us to investigate the distribution in Texas. Correll and Johnston (1970) state that *S. pulchellum* occurs "In seepage on and about calcareous rocks in e. Tex...", while Hatch et al. (1990) list the species as a native plant of the Pineywoods and Blackland Prairies vegetational regions of the state. The species is not included in *Shinners' Manual of the Flora of North Central Texas* (Mahler 1988), although Clausen (1975) indicated its occurrence within the area treated by the work.

Clausen's (1975) distribution map gives the most thorough account of *Sedum pulchellum* in Texas. Unfortunately, his treatment presents certain

problems. Foremost is the lack of an exsiccata list used in preparation of the map. He mentions that "A person desiring accurate information about species in any area not surveyed in detail in the present study should go to the area himself. The indication on maps that a species occurs in such an area should be sufficient notice." The scale of the map is such that it is difficult to determine the location of the sites. Additionally, points that could have been included, based upon dates of collections and presence in herbaria that were cited as being consulted, do not appear. This includes the Weches formation of San Augustine and Sabine counties in east Texas, an area from which the species is well known, and Grayson County in NC Texas. Nonetheless, after canvassing the herbaria cited by Clausen, it was possible to later verify all but two of the locations indicated on his map (see Fig. 1). A search of Clausen's documents in the Cornell University Archives yielded no additional information. These undocumented locations include one point in NE Texas, which, as best can be determined, is either in Red River or Bowie County. Considering the species documentation in nearby Lamar County and adjacent Oklahoma [McCurtain, Choctaw, and Bryan Counties (McGregor et al. 1977)], this particular occurrence is of minor significance. The other undocumented location given by Clausen, however, appears to be either in Burnet County or Llano County (or Blanco County?), an area visited by Clausen in 1970 (Clausen 1975). This unconfirmed record is far more notable because it appears to be on the Edwards Plateau, and therefore may be the most western point in the distribution of the species.

Additional field collections, a survey of herbarium specimens, and Clausen's (1975) distribution map in *The Sedum of North America* were used to document the expansion of the known distribution of *Sedum pulchellum* to include other counties of the Blackland Prairies and Pineywoods as well as the Post Oak Savannah, Cross Timbers and Prairies, and the Edwards Plateau.

Specimens examined: TEXAS. Bell Co.: Owl Creek Mts., ca. 0.8 air mi SSW of jct. of Preachers Creek and Owl Creek, Ft. Hood, 4 Jun 1992, *Carr 11984* (TEX); N side of Leon River ca. 0.7 mi ESE of center of Belton Dam, 1 May 1992, *Carr 11868*, *Enquist & McNeal* (TEX). Bosque Co.: at intersection of Brazos River & Cedar Creek, 97.32808 lat. 31.78761 long., 31 May 1998, *Branch 300* (BAYLU). Coryell Co.: Bluff over Leon River ca. 200 m W of Mother Neff State Park on property of Charlotte & Larry Weiss, 18 May 1996, *Holmes 8240* (BAYLU). Grayson Co.: E of Denison in field near creek running into Smith Creek, 18 May 1950, *Gentry 51-1430* (TEX). Lamar Co.: 2.25 mi N of Roxton, 21 May 1937, *Cory 23107* (GH). Limestone Co.: Hwy 14 and Pk. Rd. 35, Jun 1993, *Singhurst 1665*, *Jones, & Blair* (BAYLU). Palo Pinto Co.: 3.3 mi N of jct. Hwy 287 & FM 3027 on Hwy 287, 1.7 mi WSW of Grantham Cemetery, 11 Apr 1998, *Singhurst 6593* (BAYLU). Sabine Co.: Weches Formation ca. 4 mi W of Milam, 9 Apr 1964, *Correll & Correll 29088* (LL); ca. 1 mi W of jct. Hwy 21 and FR 226 on Hwy 21, 31 Mar 1980, *Nixon 10116* (ASTC); 1.4 mi E of jct. of Hwys 21 and 330, 12 May 1980, *Nixon 10534* (ASTC); on W side of TX 21 ca. 1.5 mi S of Geneva, 22 Apr 1987, *Orzell 5104 & Bridges* (TEX). San Augustine Co.: Weches formation ca. 1 mi SE of San Augustine, 20 Apr 1962,

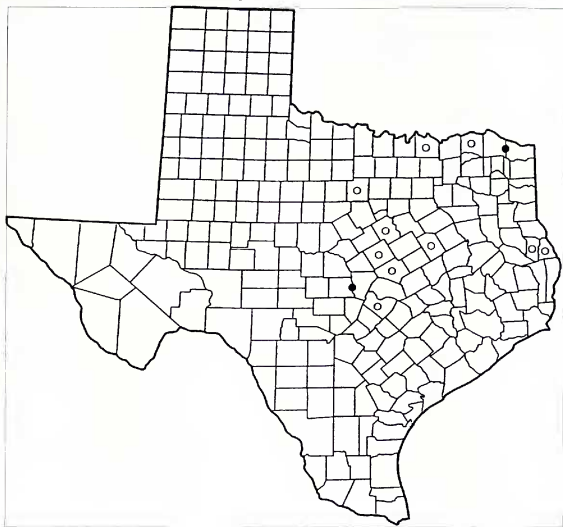


FIG. 1 Documented distribution of *Sedum pulchellum* by county in Texas. The closed circles represent locations cited by Clausen (1975) that could not be verified (see text for additional comments).

Correll 25003 (LL); old Hemphill Rd. just E of San Augustine, 10 May 1969, *Correll 37202* (LL); ca. 0.5 mi E of San Augustine on Hwy 21, S on a dirt road ca. 1.0 mi, 11 May 1979, *Nixon 9473, Marietta & Matos* (ASTC); ca. 1.0 mi S of Chapel Hill on Sanitary Landfill Rd., 15 Apr 1985, *Nixon 14423* (ASTC); 0.2 mi SW of road to Sunrise, 0.9 mi SE of jct. TX 21 at point 1.1 mi E of center of St. Augustine, 22 Apr 1987, *Orzell 5109 & Bridges* (TEX). Travis Co.: near Jester Blvd., Jester Estates, Austin, 1 May 1995, *Miller s.n.* (TEX); Bull Creek, 11 Apr 1914, *Young s.n.* (TEX).

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REFERENCES

- CLAUSEN, R.T. 1975. *Sedum* of North America north of the Mexican Plateau. Cornell University Press: Ithaca, New York.
- CORRELL, D.S. and M.C. JOHNSTON. 1970. Manual of the vascular plants of Texas. The University of Texas at Dallas: Richardson.
- HATCH, S.L., K.N. GANDHI, and L.E. BROWN. 1990. Checklist of the vascular flora of Texas. Texas Agric. Exp. Sta. MP-1655, Texas A&M University, College Station.
- MAHLER, W.F. 1988. Shinnery's manual of the North Central Texas flora. Botanical Research Institute of Texas, Inc.: Fort Worth.
- MCGREGOR, R.L. 1977. Atlas of the flora of the Great Plains. Iowa University Press: Ames.